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875—62.4 (88A) Design and manufacture of covered equipment. This rule sets forth requirements for the design and manufacture of all covered equipment, except a bungee jump covered by 875—Chapter 63.

- **62.4(1)** Codes adopted by reference. ASTM F2374-10 shall apply to all air-supported structures notwithstanding the definition and use of the phrase "inflatable amusement device" in ASTM F2374-10.
- a. All covered equipment. Effective July 1, 2016, all covered equipment shall comply with National Electric Code, NFPA 70-2014.
- b. Tramways. All tramways subject to the rules of this chapter and in use prior to July 1, 2016, shall be designed and tested in accordance with the ANSI B77.1 standard in effect at the time of installation
- c. New covered equipment. Effective July 1, 2016, new covered equipment and covered equipment undergoing a major modification shall be designed and tested in accordance with ANSI B77.1-2011 and ANSI B77.1A-2012 and ASTM F1159-15a, F1193-14, F1957-99(2011), F2007-12, F2137-15, F2291-15, F2374-10, F2375-09, F2376-13, F2460-11, F2959-14, and F2960-15, as applicable.
- d. Existing covered equipment. Covered equipment manufactured before July 1, 2016, must comply with the applicable design criteria of subrule 62.4(2) through July 1, 2021. After July 1, 2021, covered equipment, except tramways, shall meet the criteria for service-proven equipment set forth in ASTM F2291-15.
- **62.4(2)** *Design criteria.* Structural materials and construction of covered equipment shall conform to recognized engineering practices, procedures, standards and specifications. The design, materials and construction features shall incorporate a safety factor of 5 or alternative safety factors recommended by the original manufacturer or by a professional engineer with credentials and experience acceptable to the commissioner.
- **62.4(3)** *Data plate.* A manufacturer's data plate in compliance with ASTM F1193-14, section 10, shall be affixed to covered equipment.
- **62.4(4)** Speed-limiting device. Covered equipment capable of exceeding its maximum safe operating speed shall be provided with a speed-limiting device. Steam engines that require an overspeed throttle setting to initiate the operation are exempt from the requirement of this subrule.
- **62.4(5)** Patron restraint and containment. Covered equipment shall be designed to safely contain and restrain patrons during the intended action. Any surface within reach of a patron shall be smooth, rounded, and free from projections such as bolts, screws, or splinters. Padding shall be installed to prevent or minimize the possibility of injury.
- **62.4(6)** Safety stop devices. Electrical safety stop devices shall cause covered equipment to fail safe in the event of power failure or any malfunction.
- **62.4(7)** *Chains.* If a chain is used as a safety device or in a stress-bearing application, the chain shall be certified with adequate load-carrying capacity. Twisted wire or stamped chain shall not be used for safety devices or in stress-bearing applications.
- **62.4(8)** Front openings and awnings. Front openings and awnings shall be stabilized with safety latches, safety pins, or other devices.
- **62.4(9)** Shooting galleries. A shooting gallery shall use only equipment, shells, pellets, and bullets designed for shooting galleries. Means shall be provided to prevent turning the weapon away from the intended target.
- **62.4(10)** *Flying objects.* Where flying objects such as darts, balls, pellets, shot, and bullets are a potential hazard:
 - a. Ricocheting shall be prevented by absorbent wings or panels; and
- b. Absorbing walls, sandbags, or other mechanisms shall be installed along the bottom, back, and sides of the booth to protect passersby.